

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-16. (Canceled)

17. (Currently Amended) A method of producing a protective immune response against a pathogen in a mammal in need thereof, the method comprising administering to a lung of the mammal[[.]] a protective amount of an aerosol comprising biodegradable microspheres of an average diameter of from 0.5 to 5 μm comprising a non-living reagent that produces a protective immune response against the pathogen in a mammal to whom it is administered, wherein administration of the aerosol to the lung produces a protective immune response against the pathogen in the mammal to whom it is administered.

18. (Previously Presented) The method of Claim 17 wherein the non-living reagent is an antigenic polypeptide or a nucleic acid sequence that encodes an antigenic polypeptide.

19. (Previously Presented) The method of Claim 17 wherein the non-living reagent is a sub-unit vaccine.

20. (Previously Presented) The method of Claim 17 wherein the non-living reagent is selected from the group consisting of diphtheria toxoid, tetanus toxoid, *Botulinum* toxin FHC, *Bacillus anthracis* protective antigen (PA), or a polypeptide that generates a protective immune response against *Yersinia pestis*.

21. (Previously Presented) The method of Claim 20 wherein the non-living reagent is the V antigen of *Y. pestis* or an immunologically active fragment thereof or a variant of these, or the F1 antigen of *Y. pestis* or an immunologically active fragment thereof or a variant of these, or a combination of these.

22. (Previously Presented) The method of Claim 17 wherein the microspheres have an average diameter of less than 3 μ m.

23. (Previously Presented) The method of Claim 17 wherein the microspheres comprise a biodegradable polyester.

24. (Previously Presented) The method of Claim 23 wherein the polyester comprises Poly-lactide (PL).

25. (Previously Presented) The method of Claim 17 wherein the microspheres are lyophilized.

26. (Cancelled).

27. (Cancelled)

28. (New) A method of producing a protective immune response against a pathogen in a mammal in need thereof, the method comprising administering to a lung of the mammal a protective amount of an aerosol comprising biodegradable microspheres of an average diameter of from 0.5 to 5 mm and comprising a non-living reagent that produces the protective immune response against the pathogen in the mammal, wherein the aerosol comprises the non-living reagent in a form encapsulated within the biodegradable microspheres and in a free non-encapsulated form.